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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/897,429	HALES, ROBERT J.	
	Examiner	Art Unit	
	Jason Proctor	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-16,19,21,22,24 and 31-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-16,19,21,22,24 and 31-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1, 3-16, 18-19, 21-22, 24, and 31-35 were rejected in the office action of 28 August 2006.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 February 2007 has been entered.

The 28 February 2007 submission has amended claims 1, 12, 13, 19, 21, and 31-35, and canceled claim 18. Claims 1, 3-16, 19, 21, 22, 24, and 31-35 are pending in this application.

Claims 1, 3-16, 19, 21, 22, 24, and 31-35 are rejected.

Priority

1. Applicant's claim for domestic priority under 35 U.S.C. § 119(e) is acknowledged. The Examiner thanks Applicants for clarifying where support for the claims is found.

Applicants have submitted (27 July 2005) that:

> Support is believed to exist in the '303 and '040 applications for each of the now-pending claims. [...] Thus, it is believed that enabling support is found in the '303 application for claim 10, and for the same or similar reasons the '303 and '040 applications are believed to fully support the balance of the now-pending claims.

Applicants' arguments have established that the '303 and '040 application fully support the pending claims.

Claim Objections

2. The previous objections to claims 18 and 21 have been withdrawn in response to the 28 February 2007 submission.

Response to Arguments – Printed Publications

3. In this and the previous Office Action, the Examiner holds that certain "CADDStar" electronic help documents constitute "printed publications". In response, Applicants submit that:

> Applicant respectfully notes, however, the limited distribution of the present software and that distribution of the subject documents was only ancillary to distribution of the software. Consequently, the subject documents have not been "disseminated or otherwise made available to the extend that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it." *In re Wyer*, 655 F.2d 221, 210 USPQ 790 (CCPA 1981). Accordingly, Applicant believes that the In re Wyer standard for publication is not met.

This argument has been fully considered but has been found persuasive for the reasons set forth in the previous Office Action. The Examiner submits that the CADDStar products were ostensibly produced as commercial products, and therefore would be discovered by a person of ordinary skill in the art exercising reasonable diligence. Further, Applicants acknowledge that the CADDStar electronic help documents were available and accessible to persons concerned with the art to which the document relates. That is, the CADDStar electronic help documents were disseminated (ancillary or not) to the distribution of the software described by the very same documents.

Therefore, the Examiner maintains that the following CADDStar electronic documents are properly regarded as "printed publications".

"CADDstar Version 5.2" was offered for public or private sale and that the corresponding documentation, provided in Appendix R, was disseminated with that software product on or around 25 February 2000.

"CADDstar version 5.0 help manual" is a printed publication as of 11 April 1998.

"CADDstar version 3.81 help manual" is a printed publication as of 11 July 1997.

Claim Rejections - 35 USC § 112

4. In response to the previous rejections under 35 U.S.C. § 112, first paragraph, of claims 1, 3-12, and 31-35 as failing to comply with the written description requirement, Applicants have correctly called to the Examiner's attention that the provisional application 60/236,040 is published via the Public PAIR system of the United States Patent and Trademark Office. Accordingly, these rejections have been withdrawn.

5. In response to the rejection of claims 21, 22, and 24 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement for the claim language "modifying said graphically represented logical model using markup lines," Applicants submit that:

> [A]pplicant respectfully notes that the specification describes preparing a red-line drawing 1220 by the field technician based on the existing system graphic using the laptop computer... (Page 36, line 11 – page 37, line 1)

> Applicant respectfully submits that a "markup line" would be understood by one of skill in the art as intrinsic to a redline document. In light of the above-noted disclosure, one of ordinary skill in the art would readily understand that the term "markup line" refers to a visual indication of a change proposed or made to a plan record.

The Examiner has fully considered this argument and finds it persuasive. The previous rejection of claims 21, 22, and 24 under 35 U.S.C. § 112, first paragraph, is withdrawn.

6. In response to the rejection of claim 33 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, Applicants identify page 19 of provisional application 60/234,303 as providing written description. Accordingly, the rejection of claim 33 under 35 U.S.C. § 112, first paragraph, is withdrawn.

7. In response to the rejection of claim 34 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, Applicants identify page 19 of provisional application 60/234,303 as providing written description. Accordingly, the rejection of claim 33 under 35 U.S.C. § 112, first paragraph, is withdrawn.

Claim Interpretation

Regarding the phrase "substantially instantaneously identical" as recited by claim 13, Applicants have submitted (27 July 2005) that:

> One of skill in the art would readily appreciate that the meaning of the term "substantially instantaneously identical" reflects the context of the system in which the term is used. Thus for example where data is mirrored on two servers, as a practical matter, the same data is available to users of both servers on a timeframe that is otherwise compatible with system operation. As such, one of skill in the art would understand the subject claim limitation without the expression of an absolute time span.

Regarding the phrase "detail drawing" as recited by claim 1 and others, the Examiner provided an interpretation in the previous Office Action. In response, Applicants submit that:

> In relation to the phrase "detail drawing," section 16.1 of provisional application 60/236,040 states that "[t]o create a new detail drawing... a dialog box will appear asking if you want to, 'Create a new detail drawing?' You will then be prompted to name the detail drawing..." Applicant respectfully submits that the term "detail drawing" thus refers to a discrete entity that can be "separately identified." The detail drawing is therefore not a functional equivalent of merely magnifying (zooming in on) an otherwise existing entity.

Additionally, the claim language has been amended to read "a separately identified detail drawing" (claim 1) and "a separately identified detailed layout" (claim 13). Applicants' interpretation is acknowledged.

Regarding the phrase "markup lines" as recited by claim 21, Applicants submit that "the term 'markup line' refers to a visual indication of a change proposed or made to a plan record." The Examiner thanks Applicants for this clarification. Applicants' interpretation is acknowledged.

Response to Arguments – 35 USC § 102

8. In response to the rejection of claims 1, 3-16, 18-19, 21-22, 24, and 31-35 under 35 U.S.C. 102(a) as being clearly anticipated by "CADDstar Version 5.2 Help Document", Applicants submit that:

> Applicant respectfully submits, however, that [...] the CADDstar Version 5.2 Help Document embodies the Applicant's own description of the invention and thus cannot logically predate the claimed invention.

The Examiner respectfully traverses this argument as follows.

The Examiner acknowledges Applicants' position, however the argument of counsel cannot take the place of evidence where evidence is required. The Examiner does not understand the CADDstar Version 5.2 Help Document to identify, as the sole authors of that document, the inventors named in the present application. If this is incorrect, clarification is respectfully requested. It would be improper to withdraw these rejections based solely upon Applicants' remarks.

This rejection may be overcome by properly executed affidavit showing that the CADDstar Version 5.2 Help Document was solely authored by the inventors named in this application, or authored entirely under the direction of the inventors named in this application, or by antedating the reference.

9. In response to the rejection of claims 13-16, 19, and 21-24 under 35 U.S.C. § 102(b) as anticipated by "CADDstar Version 5.0 Help Manual" and/or "CADDstar 3.81 Help Manual," Applicants submit that:

> Applicant notes that claim 13 as amended includes the features of "a detail drawing portion adapted to record a separately identified detailed layout of a network within a multiple dwelling unit" [...]
>
> Claim 19 includes the features of "first and second optical fibers... wherein said first and second fibers include respective fiber segments identified to respective owners" [...] Claim 21 includes the features of "transmitting... [a] modified logical model to said first computer and subsequently receiving authorization at said second computer for said operatively connecting said first and second physical communication cables"[...] These features, at least, are believed to patentably distinguish the respective claims from the references now of record.

The Examiner responds as follows.

Applicants' arguments regarding claims 13-16 and 21-24 have been fully considered and found persuasive. Accordingly, those rejections have been withdrawn.

Applicants' argument regarding claim 19 has been fully considered and found unpersuasive. "CADDstar Version 5.0 Help Manual" discloses an "Address" command at section 6.9 that appears to anticipate the feature recited in Applicants' arguments. This feature is addressed below in the rejection, which has been maintained for claim 19.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

10. Claims 1, 3-16, 18-19, 21-22, 24, and 31-35 rejected under 35 U.S.C. 102(a) as being clearly anticipated by "CADDstar Version 5.2 Help Document".

Applicants' response to the Requirement for Information states (page 8, response to item 10 of the Requirement for Information):

> Applicant notes that the sections labeled 16.0 (Details Menu)-16.11 (Designing from a Node to a Detail) in the '040 application are first present in the help document for CADDstar Version 5.2. Accordingly, submitted herewith as Appendix Q is a version screen for the help manual for CADDstar Version 5.2. The version screen shows a version date of February 25, 2000.
>
> Also submitted herewith as Appendix R is a copy of a help manual document for CADDStar Version 5.2. The copy was prepared from a computer file having a date of August 3, 2000.

Applicants' remarks state (page 15):

> Sections 16.0-16.11 are also found in the CADDstar Version 5.2 Help Manual, which has a date of February 25, 2000. Applicant respectfully notes that the version date of February 25, 2000 predates the filing of the '040 application by less than one year; the filing date of the '040 application being September 28, 2000. Accordingly, the rejection of claim 1 under 35 U.S.C. § 102(b) should be withdrawn.

Applicants' arguments are persuasive; for this reason, claims 1, 3-16, 18-19, 21-22, 24, and 31-35 are rejected under 35 U.S.C. § 102(a) as being clearly anticipated by "CADDstar Version 5.2 Help Document".

This rejection may be overcome by properly executed affidavit showing that the CADDstar Version 5.2 Help Document was solely authored by the inventors named in this application, or authored entirely under the direction of the inventors named in this application, or by antedating the reference.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claim 19 is rejected under 35 U.S.C. § 102(b) as being anticipated by "CADDStar Version 5.0 Help Manual" and/or "CADDStar Version 3.81 Help Manual".

As set forth above, the publication date of "CADDStar Version 5.0 Help Manual" has been established as 11 April 1998.

As set forth above, the publication date of "CADDStar Version 3.81 Help Manual" has been established as 11 July 1997.

Applicants have stated in their response to the Requirement for Information (page 8, response to item 10 of the Requirement for Information):

> Comparison of the United States provisional patent application number 60/236,040 (*hereinafter* the '040 application), the benefit of which is claimed in the present application, to the CADDstar Version 5.0 Help Manual shows that at least the sections labeled 16.0 (Details Menu)-16.11 (Designing from a Node to a Detail) are present in the '040 application, but not in the CADDstar Version 5.0 Help Manual.

> Accordingly, the invention as disclosed in sections 16.0-16.11 of the '040 application are neither disclosed nor suggested in the CADDStar Version 5.0 Help Manual.

Claim 19 does not appear to draw support from sections 16.0-16.11 of the '040 application.

Applicants' remarks attempt to distinguish claim 19 from these applied references through the claimed features of "first and second optical fibers... wherein said first and second fibers include respective fiber segments identified to respective owners." "CADDstar Version 5.0 Help Manual" discloses "The Address command in the Strand pull down menu not only allows the placement of addresses in the drawing. It also sets up some very important database relationships between the address, the street name, and the pole or pedestal serving the address. These database relationships will eventually be used to assign a subscriber's address to the tap and amplifier that serves it." (Section 6.9, Addressing). This disclosure appears to anticipate fiber segments ("strands") identified to respective owners ("subscriber's address", indicating the subscriber).

Therefore the Examiner concludes that claim 19 is anticipated by "CADDStar Version 5.0 Help Manual" and/or "CADDStar Version 3.81 Help Manual".

Response to Arguments – 35 USC § 103

12. In response to the previous rejections under 35 U.S.C. § 103 involving US Patent No. 6,499,006 to Rappaport et al., Applicants argue primarily that:

> The Rappaport reference in no way teaches or suggests "a separately identified detail drawing" [as recited by claim 1].

Applicants' arguments have been fully considered and have been found persuasive in light of the amended claim language.

13. Applicants' arguments in response to the previous rejection of claims 21, 22, and 24 under 35 U.S.C. § 103 have been fully considered but are moot in view of the new grounds of rejection.

14. In response to the rejection of claim 13 under 35 U.S.C. § 103, Applicants argue primarily that:

> [T]here is nothing in Tonelli or any of the references now of record to teach or suggest "[a] system for planning a network comprising: ...software including a detail drawing portion adapted to record a separately identified detailed layout of a network within a multiple dwelling unit."

The Examiner has fully considered this argument in light of the amended claim language and finds it persuasive. Accordingly, the previous rejection has been withdrawn.

15. In response to the rejection of claim 19 under 35 U.S.C. § 103, Applicants argue primarily that:

> The Patent Office acknowledges that Rappaport does not teach an optical cable having a buffer with first and second fibers with different nominal characteristics. Without further support, the Office Action asserts that this group of components would be included in the computer parts database taught by Rappaport.

Applicants' arguments misconstrue the previous rejection. Further, Applicants' arguments unreasonably constrain the abilities of a person of ordinary skill in the art. Applicants do not claim to have invented "first and second fibers with different nominal characteristics," but merely incorporating a representation of those fibers in a CAD system. Taking into

consideration the teachings of the prior art as cited in the previous Office Action, the Examiner maintains the previous determination of obviousness.

Applicants further argue that:

> Applicant respectfully submits that there is nothing in "an optical cable having a buffer with first and second optical fibers, said optical fibers having different nominal characteristics" that intrinsically teaches of suggests "first and second fibers include respective fiber segments identified to respective owners."

The Examiner does not understand Applicants' argument, which appears to distinguish one portion of the claim language over a second portion of the same claim.

Applicants' arguments directed to claim 19 have been fully considered and found unpersuasive.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claims 1 and 3-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 6,499,006 to Rappaport et al., hereafter referred to as Rappaport, in view of "Network Tools and Tasks" by Kyle Kuczun and M.D. Gross, hereafter referred to as Kuczun.

Regarding claim 1, Rappaport teaches a method for deploying a fiber optic communication network (column 1, lines 25-48) comprising:

Storing an attribute of an optical communication component in a catalog database entry (column 4, lines 46-50; column 6, lines 36-60) referred to as a computer parts database;

Associating the catalog database entry with a design profile (column 6, lines 40-44; column 8, lines 23-35);

Selecting and reading the attribute from the database entry (column 6, lines 40-44);

Associating the attribute with a planned deployment of a physical instance of the component (column 8, lines 23-35); and

Forming a visible image representing said planned deployment, said visible image including a detail drawing (column 4, lines 33-50).

Rappaport does not explicitly teach including a separately identified detail drawing in the visible image.

Kuczun teaches a separately identified detail drawing [*"Fig. 6. If the designer selects a specific node in the diagram more information appears."* (page 4); *"Trawl's scan of the network yields more data than can be concisely displayed (e.g., it includes the node types of the network devices). Clicking on an icon in the network diagram brings up additional information about the element (figure 6)."* (page 5, left column); alternatively, *"In Lookup, the designer can link drawings in the Napkin's sketchbook with specific sites on the web, for example, to vendor sites... Figure 10 shows a router symbol linked to Cisco's web site that provides technical information on their routers."* (page 6, left column); *"Figure 10. Bookmarking by drawing? A vendor web page has been linked to a sketch of a router."* (page 6)].

Rappaport and Kuczun are analogous art because both are drawn to network design tools.

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Kuczun and Rappaport by incorporating either the feature wherein "clicking on an icon in the network diagram brings up additional information" or the feature wherein a network symbol is linked to technical information such as a vendor drawing. The motivation for doing so is expressly provided by Kuczun, such as to improve the usability of the CAD tool [*"One of the most essential* [advantages] *is abstraction: Initial designs are abstract, final designs are detailed. The ability to view and manipulate a design through varying levels of abstraction is essential."* (page 7, right column)].

Therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Rappaport and Kuczun to arrive at the invention specified in claim 1.

Regarding claim 3, Rappaport teaches a computer-implemented method (column 4, lines 33-50) and recording associations in a computer database (column 6, lines 40-49).

Regarding claim 4, Rappaport does not explicitly teach physically deploying a physical instance of the component. However, Rappaport does teach a network design tool (column 5, lines 57-65; column 8, lines 23-35) and therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to physically deploy the network after it has been designed.

Regarding claims 5 and 6, Rappaport teaches identifying a geographic location for the network and displaying a graphical representation of the geographic location (column 4, lines 3-9; column 4, lines 33-38; column 8, lines 44-57).

17. Claims 7-9, 12, and 31-35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 6,499,006 to Rappaport in view of "Network Tools and Tasks" by Kuczun as applied to claims 1 and 5 above, and further in view of US Patent No. 4,866,704 to Bergman.

Regarding claims 7-9, 12, and 31-35, Rappaport in view of Kuczun does not explicitly teach the fiber optic equipment recited by these claims.

Bergman teaches the fiber optic equipment recited by these claims (title, abstract, columns 1-2, etc.).

Bergman and Rappaport in view of Kuczun are analogous art because both are drawn to communications networks.

Therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of the prior art to arrive at the inventions specified in claims 7-9, 12, and 31-35 as expressly motivated by Bergman, such as to design a network for spacecraft environments [*"This invention provides an asynchronous, high-speed, fiber optic local area network originally developed for tactical environments, such as military field communications systems, but having additional specific benefits for other environments such as spacecraft and the like."* (column 3, lines 11-34)].

18. Claims 10-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 6,499,006 to Rappaport in view of "Network Tools and Tasks" by Kuczun as applied to claim 1 above, and further in view of US Patent No. 5,761,432 to Bergholm et al., hereafter referred to as Bergholm.

Regarding claims 10 and 11, Rappaport in view of Kuczun teaches the limitations of claim 1.

Rappaport does not expressly teach identification of network components with an owner or with a communication circuit.

Bergholm teaches a planned deployment including identification of an instance with an owner (column 2, lines 39-63; column 4, lines 13-24).

Bergholm and Rappaport in view of Kuczun are analogous art because both are directed to network design.

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Bergholm with Rappaport in view of Kuczun by incorporating the attributes described by Bergholm, including ownership of the network equipment, in the computer parts database of Rappaport. The motivation to do so is expressly provided by Bergholm, such as to apprise network builders of inventory information and designing links to implement orders (Bergholm, column 1, lines 55-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Bergholm with Rappaport and Bergholm to arrive at the invention specified in claims 10 and 11.

19. Claims 13 and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over "Modelling Multiple View Of Design Objects In A Collaborative Cad Environment" by Rosenman in view of US Patent No. 6,499,006 to Rappaport, further in view of "Network Tools and Tasks" by Kuczun.

Regarding claim 13, Rosenman teaches a first computer including a first memory storage device having application software encoded therein; a second computer, operatively connected to said first computer, having a second memory storage device adapted to record first project data; and a third computer, operatively connected to said second computer, having a third memory storage device adapted to record second project data, said first and second project data being substantially instantaneously identical (pages 21-23, "Computer-Supported Collaborative Design");

Said software including a catalog portion being adapted to receive data defining a plurality of communication network components (page 22, "Design Object Database System");

Said first data including a logical model (pages 21-23, "Computer-Supported Collaborative Design").

Rosenman does not explicitly teach the claimed "design profile portion," "calculations portion," or "detail drawing portion."

Rappaport teaches a design profile portion adapted to receive data defining a plurality of design rules related to logical design of a network [*"Each component utilizes electromechanical information available from the parts list library that fully describes the component in terms of its physical operating characteristics (e.g., the noise figure, frequency, radiation characteristics,*

etc.). This information is directly utilized during the prediction of wireless system performance metrics." (column 6, lines 26-60)].

Rappaport teaches a calculations portion adapted to calculate power and signal relationships within a communications network (column 7, lines 10-27, etc.). Rappaport teaches a multiple dwelling unit (FIG. 3, etc.).

Rappaport does not explicitly teach the claimed "detail drawing portion".

Kuczun teaches a detail drawing portion adapted to record a separately identified detailed layout of a network (Figure 9).

Rosenman, Rappaport, and Kuczun are all analogous art because all are drawn to CAD.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Rappaport with Rosenman as expressly motivated by Rappaport, such as to simplify the design task [*"Using the present method, it is now possible to assess the performance of a wireless communication system to a much higher level of precision than previously possible... The design of wireless communication systems is often a very complex and arduous task, with a considerable amount of effort required to simply analyze the results of predicted performance."* (column 5, liens 52-65)]. It would have been obvious to a person of ordinary skill in the art to combine the teachings of Kuczun with Rosenman in view of Rappaport as expressly motivated by Kuczun, such as to improve the usability of the CAD tool ["One of the most essential [advantages] is abstraction: Initial designs are abstract, final designs are detailed. The ability to view and manipulate a design through varying levels of abstraction is essential." (page 7, right column)].

Therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of the prior art to arrive at the invention specified in claim 13.

Regarding claim 16, Rappaport teaches a software method for designing a network comprising a wireless communication portion (column 5, lines 52-65).

Claims 14-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rosenman in view of Rappaport in view of Kuczun as applied to claim 13, further in view of US Patent No. 4,866,704 to Bergman.

Regarding claims 14-15, Rosenman in view of Rappaport in view of Kuczun does not explicitly teach designing a network having an optical fiber portion.

Bergman teaches a fiber optic network with buffers and different nominal characteristics (title, abstract, columns 1-2, etc.)

Bergman and Rosenman in view of Rappaport in view of Kuczun are analogous art because both are drawn to communications networks.

It would have been obvious to a person of ordinary skill in the art to combine the teachings of the prior art to arrive at the invention specified in claims 14-15 as expressly motivated by Bergman, such as to design a network for spacecraft environments [*"This invention provides an asynchronous, high-speed, fiber optic local area network originally developed for tactical environments, such as military field communications systems, but having additional*

specific benefits for other environments such as spacecraft and the like." (column 3, lines 11-34)].

20. Claim 19 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Rappaport in view of Tonelli, further in view of US Patent No. 5,761,432 to Bergholm.

Regarding claim 19, Rappaport teaches a software method for designing a network comprising:

A catalog portion adapted to receive data defining a plurality of communication network components (column 4, lines 46-50; column 6, lines 36-60) referred to as a computer parts database;

A data portion indicating a logical model of a communications network (column 8, lines 23-35); and

Calculating power and signal relationships within the communications network (column 7, lines 10-48).

Rappaport does not explicitly teach a design profile portion adapted to receive data defining a plurality of design rules.

Tonelli teaches a system for designing a network (column 2, lines 39-63) wherein a plurality of design rules define how a logical model of a network may be constructed (column 4, lines 44-60).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the teachings of prior art to produce a network design tool that

can validate the design choices made by the user so as to reduce problems when deploying the network. The combination could be achieved by including the rules information in the computer parts database taught by Rappaport so the software can prevent the user from making invalid selections.

Rappaport does not explicitly teach designing a network having an optical fiber portion, but does teach that the disclosed method is adaptable to other technologies (column 10, line 53-column 11, line 6).

Bergholm teaches a system for designing a network (column 2, lines 39-63) including an optical fiber portion (column 4, lines 25-33).

Bergholm teaches a method for network administration and design (column 2, lines 39-63) wherein network components (exemplified by links) are identified as belonging to circuits (network hierarchy) and have attributes such as ownership (column 4, lines 13-24).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to combine the teachings of the prior art to produce a network design tool that can design networks having an optical fiber portion so as to enable designers more flexibility in their design. The combination could be achieved by including optical fiber network components in the computer parts database taught by Rappaport (column 6, lines 36-60).

Rappaport does not explicitly teach an optical cable having a buffer with first and second fibers, said fibers having different nominal characteristics, however the rejection formed in the rejection of claim 14 renders obvious the decision to incorporate the fiber optical communication network components necessary to adequately design a fiber optical communication network. The recited group of components would be included in the computer parts database taught by

Rappaport and made available to the network designer (column 8, lines 23-35; column 6, lines 36-60).

21. Claims 21 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over "Modelling Multiple Views of Design Objects In A Collaborative Cad Environment" by M.A. Rosenman in view of "Network Tools and Tasks" by Kuczun.

Regarding claim 21, Rosenman teaches a method of using a CAD system comprising:

Providing first and second computers including first and second memory storage devices respectively, each having application software encoded therewithin [*"The modeling of multiple views has been implemented using the CAD system, AES, and the INGRES RDBMS under the AIX environment on IBM RISC systems/600 workstations."* (page 22, "Implementation")];

Operatively connecting said first and second computers through a communications link [*"When one model is manipulated, corresponding effects must be made in the other. At the very least, some form of alert must occur, whether it be in textual, graphic or audial form."* (page 21, "Computer-Supported Collaborative Design")];

Including a logical model within said first storage device [*"A model or abstraction of an object is a representation of that object resulting from a particular view taken... Notwithstanding, in order for CAD to be useful in the AEC domain, a comprehensive representation of a building must be able to be built from which various abstractions can be formed depending on the particular need."* (page 4, "Multiple Models")];

Receiving said logical model through said link into said second computer memory device [*"For example, architects will model certain elements such as floors, walls, doors, and windows... Structural engineers, however, see the walls and floors in differently, namely as structural elements capable of bearing loads and resisting forces and moments... Both models must coexist since the structural engineers will need to carry out calculations based on their model while the architects may need to ascribe different properties to their separate wall elements, e.g. different finishes."* (page 5, "Multiple Models")];

Representing said logical model graphically (pages 4-5, "Graphic Representation of Models");

Modifying said graphically represented logical model using markup lines [*"When, for example, a structural engineer selects a shear wall for discussion, the corresponding walls in the architect's model should be highlighted. If the dimensions of that wall or its material are changed by the structural engineer, this should be reflected in the architect's model."* (page 22, "Computer-Supported Collaborative Design")];

Transmitting said modified logical model to said first computer [*"When one model is manipulated, corresponding effects must be made in the other. At the very least, some form of alert must occur, whether it be in textual, graphic or audial form."* (page 21, "Computer-Supported Collaborative Design")].

Rosenman does not explicitly teach the limitations concerning a communications network, the model including first and second logical communication cables or operatively connecting those cables.

Kuczun teaches a method of deploying a communications network [*"We built a suite of five prototype tools (LAN-Tools) to support the tasks of network designers."* (page 3, right column)].

Kuczun teaches a logical model including first and second logical communication cables [*"The result (right) shows the designer that the initial LAN design would require an additional router, which Pronet has inserted (Macintosh, printer and server were connected via Ethernet wiring; the other Macintosh was connected using localtalk.)"* (page 6, left column)].

Kuczun teaches a model depicting operative connection of said first and second cables (page 6, left column).

Kuczun teaches operatively connecting said first and second physical communication cables according to said model [the inherent purpose of a network design tool including a model depicting a connection involving two cables].

Kuczun teaches receiving authorization for operatively connecting said first and second physical communication cables [*"...the designer may consult with others (key users, system administrators) who have an interest in the design."* (page 2, left column)].

Kuczun and Rosenman are analogous art because both are drawn to CAD.

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Kuczun and Rosenman to arrive at the claimed invention, a method of deploying a communications network using collaborative modeling software on two different computers, as expressly motivated by Kuczun to improve the usability of network CAD tools [*"Because network designers traditionally make drawings throughout the design process, we propose that the computational environment should facilitate and capitalize*

on this activity. We describe a suite of computer based network design tools that employ freehand drawing as an interface." (page 1, abstract)].

Therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Kuczun and Rosenman to arrive at the invention specified in claim 21.

Regarding claim 22, Rosenman teaches transmitting a notice of completion [*"In the type of case where, for example, the structural engineer adds some columns to a space in the building, this must also be reflected in the architect's model."* (page 22, "Computer-Supported Collaborative Design")].

22. Claim 24 is rejected under 35 U.S.C. § 103(a) as being unpatentable over "Modelling Multiple Views of Design Objects In A Collaborative Cad Environment" by Rosenman in view of "Network Tools and Tasks" by Kuczun as applied to claim 21 above, and further in view of US Patent No. 6,499,006 to Rappaport.

Regarding claim 24, Rosenman in view of Kuczun does not teach explicitly teach characterizing the signal strength of a radio frequency signal as a function of geographic location and using said characterization to locate a radio frequency antenna.

Rappaport teaches characterizing the signal strength of a radio frequency signal as a function of geographic location and using said characterization to locate a radio frequency antenna (column 7, lines 10-27, etc.).

Rappaport and Rosenman in view of Kuczun are analogous art because both are drawn to CAD.

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Rappaport with Rosenman in view of Kuczun to incorporate the wireless signal strength design functionality as expressly motivated by Rappaport to simplify the design task [*"Using the present method, it is now possible to assess the performance of a wireless communication system to a much higher level of precision than previously possible... The design of wireless communication systems is often a very complex and arduous task, with a considerable amount of effort required to simply analyze the results of predicted performance."* (column 5, liens 52-65)].

Therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of the prior art to arrive at the invention specified in claim 24.

23. Claims 1, 3-12, 13-16, and 31-35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over "CADDstar version 5.0 help manual" in view of "Network Tools and Tasks" by Kuczun.

Applicants' remarks distinguish claims 1 and 13 from the "CADDstar version 5.0 help manual" by way of the "detail drawing" limitation.

Kuczun teaches a "separately identified detail drawing."

Kuczun and "CADDstar verion 5.0 help manual" are analogous art because both are directed to network design.

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Kuczun with "CADDstar version 5.0 help manual" by including a "detail drawing" as claimed, as expressly motivated by Kuczun to improve the usability of network CAD tools [*"Because network designers traditionally make drawings throughout the design process, we propose that the computational environment should facilitate and capitalize on this activity. We describe a suite of computer based network design tools that employ freehand drawing as an interface."* (page 1, abstract)].

24. Claims 21-22 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over "CADDstar version 5.0 help manual" in view of "Modelling Multiple Views Of Design Objects In A Collaborative Cad Environment" by Rosenman.

Applicants' remarks distinguish claim 21 from the "CADDstar version 5.0 help manual" by means of the "transmitting... [a] modified logical model to said first computer and subsequently receiving authorization at said second computer for said operatively connecting said first and second physical communication cables" limitation.

Rosenman teaches the "transmitting" limitation (pages 21-23, "Computer-Supported Collaborative Design").

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Rosenman with "CADDstar version 5.0 help manual" by including the collaborative CAD environment as claimed, as expressly motivated by

Rosenman, such as to make CAD modeling useful in a collaborative environment [*"in order to make CAD modeling useful to designers in a collaborative environment, such as the AEC domain, each designer's view and representation must be accommodated and integrated within any comprehensive representation of the design under concern. This paper puts forward the argument that multiple views and representations depend upon a functional context, i.e. a particular set of functional concerns."* (page 2, second paragraph)].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Proctor whose telephone number is (571) 272-3713. The examiner can normally be reached on 8:30 am-4:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached at (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Proctor
Examiner
Art Unit 2123

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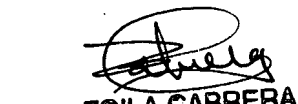

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